

## **USWR 27: Assessment of Nutritionally At-Risk Patients for Malnutrition and Development of Nutrition Recommendations/Interventions by a Registered Dietitian Nutritionist**

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**MEASURE STEWARD:** Academy of Nutrition and Dietetics

The Academy of Nutrition and Dietetics and Avalere partnered with the US Wound Registry to be the QCDR for this measure.

**Description:** Assessment of Nutritionally At-Risk Patients for Malnutrition and Development of Nutrition Recommendations/Interventions by a Registered Dietitian Nutritionist

**National Quality Strategy Domain:** Effective Clinical Care

**Measure Type:** Process

**Meaningful Measure Area:** Promote Effective Communication & Coordination of Care

**Improvement Noted As:** An increase in rate

**Care Setting:** Outpatient Services

**High Priority:** No

**Inverse Measure:** No

**Traditional Measure:** Yes

**Proportional Measure:** Yes

**Risk Adjusted:** No

**# of PERFORMANCE RATES:** 1

**Measure Level:** Clinician Measure (Registered Dietitian)

**Numerator:** Patients in the denominator with a completed nutrition assessment by registered dietitian nutritionist or clinically qualified nutrition professional who have findings of moderate or severe malnutrition AND recommendations for nutrition intervention(s) OR a nutrition care plan documented in the medical record. Nutrition interventions are categorized by those outlined by the Academy of Nutrition and Dietetics' nutrition intervention terminology:

1. Food and Nutrient Delivery
2. Nutrition Education
3. Nutrition Counseling
4. Coordination of Nutrition Care

Recommended nutrition assessment tools include:

- Nutrition-Focused Physical Exam (White, 2012)
- Subjective Global Assessment (Detsky, 1987),
- Patient Generated Subjective Global Assessment (Bauer, 2002)

American Society for Parenteral and Enteral Nutrition and Academy of Nutrition and Dietetics: *Revised 2014 Standards of Practice and Standards of Professional Performance for Registered Dietitian Nutritionists* (Competent, Proficient, and Expert) in Nutrition Support, December 2014 Volume 114 Number 12.

Detsky AS, McLaughlin JR, Baker JP, et al. What is subjective global assessment of nutritional status? JPEN J Parenter Enteral Nutr. 1987;11(1):8-13.

Bauer J, Capra S, Ferguson M. Use of the scored Patient-Generated Subjective Global Assessment (PG-SGA) as a nutrition assessment tool in patients with cancer. Eur J Clin Nutr. 2002;56(8):779-85.

**Included Populations:** Patients with a completed nutrition assessment (as defined by value set OID: 2.16.840.1.113762.1.4.1095.29), who are identified with severe or moderate malnutrition and have a documented nutrition care plan or nutrition intervention recommendations.

**Excluded Populations:** None

**Data Elements:**

- *Completed Nutrition Assessment*
- *Nutrition Care Plan*
- *Nutrition Recommendation Grouping*
- *Nutritional Status Severely Malnourished*
- *Nutritional Status Moderately Malnourished*

**Denominator:** All patients age 18 years and older who were identified to be at-risk for malnutrition based on a malnutrition screening, OR that were referred to a registered dietitian nutritionist or clinically qualified nutrition professional.

**Included Populations:** Patients with a malnutrition screening result of “at risk” (as defined by value set OID: 2.16.840.1.113762.1.4.1095.38) OR who have a referral to a registered dietitian or nutrition professional.

**Excluded Populations:** None

**Denominator Exceptions:** Documented patient reason for not participating in nutrition.

**Data Elements:**

- *Birthdate*
- *Encounter Type*
- *Encounter Date Time*
- *Coordination of Care by a Nutrition Professional*
- *Malnutrition Screening At-Risk*
- *Advanced Directives*
- *Patient Reason*

**Clinical Recommendation Statement:** This measure is supported by multiple clinical guidelines that recommend nutrition assessment for patients at-risk of malnutrition. By completing a nutrition assessment for patients at-risk of malnutrition (typically first identified by screening for risk or via referral from a physician), a dietitian can subsequently recommend a nutrition care plan that includes appropriate interventions to address the patient’s malnutrition. The early and rapid identification of malnutrition allows for early treatment of malnutrition which is associated with reduced risk of hospitalization or 30-day readmission rate, and overall healthcare costs.

The Academy of Nutrition and Dietetics in their 2017 Standards of Practice and Standards of Professional Performance for Registered Dietitian Nutritionists in Oncology Nutrition recommend the completion of nutrition assessments to assess for malnutrition and degree of severity when patients are referred to dietitians with malnutrition risk.

Charuhas macris P, Schilling K, Palko R. Academy of Nutrition and Dietetics: Revised 2017 Standards of Practice and Standards of Professional Performance for Registered Dietitian Nutritionists (Competent, Proficient, and Expert) in Oncology Nutrition. *J Acad Nutr Diet.* 2018;118(4):736-748.e42

The American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.) recommends the following: Nutrition assessment is suggested for all patients who are identified to be at nutrition risk by nutrition screening (Evidence Grade E)

Mueller C, Compher C & Druyan ME and the American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.) Board of Directors. A.S.P.E.N. Clinical Guidelines: Nutrition Screening, Assessment, and Intervention in Adults. *J Parenter Enteral Nutr.* 2011;35: 16-24.

The British Association for Parenteral and Enteral Nutrition recommends the maintenance of documentation for all individuals including results of nutritional screening and assessments (which include malnutrition findings), along with consequent action plans and treatment goals. If the patient is transferred to another care setting, this information should be readily available to all new caregivers to ensure continuity of care.

British Association for Parenteral and Enteral Nutrition. Malnutrition Matters, A Toolkit for Clinical Commissioning Groups and providers in England. Published 2012. Retrieved from: [http://www.bapen.org.uk/pdfs/bapen\\_pubs/bapen-toolkit-for-commissioners-and-providers.pdf](http://www.bapen.org.uk/pdfs/bapen_pubs/bapen-toolkit-for-commissioners-and-providers.pdf).

A consensus statement from the Academy of Nutrition and Dietetics states that the registered dietitians (RD's) assessment of critically ill adults should include, but not be limited to, the following: Food and Nutrition-Related History, Anthropometric Measurements, Biochemical Data, Medical Tests and Procedures, Nutrition-Focused Physical Findings, Client History. Assessment of the above factors is needed to correctly diagnose nutrition problems and plan nutrition interventions. Inability to achieve optimal nutrient intake may contribute to poor outcomes.

Academy of Nutrition & Dietetics. CI: Nutrition Assessment of Critically Ill Adults 2012. Academy of Nutrition & Dietetics Evidence Analysis Library. Published 2012. Retrieved from: <http://www.andeal.org/topic.cfm?menu=4800>.

**Rationale:** Recent evidence finds that older adult patients' prevalence of malnutrition ranging from 5.8 - 30% in the community (Snider, 2014) and more specifically, risk of malnutrition is more prevalent in communities facing health disparities (Sheean, 2019). Patients who are malnourished have been associated with important adverse patient safety outcomes such as increased risk of complications, hospitalization, and readmissions (Hudson, 2018, Streicher, 2018, Abizanda, 2016, Choi, 2016, Lim, 2012). Patients who experience these increased risks are also associated with a significant increase in costs (Snider, 2014).

Findings from a nutrition assessment provide the primary source of information for other clinicians (e.g., physicians, nurses, pharmacists) regarding the patient's nutritional status, clinical indicators of malnutrition to inform diagnoses, and recommendations regarding interventions and follow-on care to address the patient's malnutrition (or malnutrition risk) and prevent further nutritional decline (U.S. CRS, 2017, Khalatbari-soltani, 2016, Tappenden, 2013). The identification of these malnutrition findings are independently associated with adverse patient outcomes. In a study of 409 patients with a median age of 68, researchers were able to demonstrate that declining nutritional status as assessed by the subjective global assessment (SGA), a validated assessment tool, was significantly associated with prolonged length of stay (Allard, 2016).

**Gap in Care:** Referral rates for dietetic assessment and treatment of malnourished patients have proven to be suboptimal, thereby increasing the likelihood of developing such complications Corkins, 2014,

Barker, 2011, Amaral, 2007, Kruizenga, 2005). Although a review of nationally-representative data on cost and utilization indicated that in 2016, 8% of patients had a diagnosis of malnutrition (Barrett, 2018), this may be a severely underreported figure identified in other research studies which have estimated that 4-19 million cases are left undiagnosed and untreated. A study by Sherry et. al (2017) demonstrated that only 65% of patients who screened positive for malnutrition risk received any referral to a nutrition professional or an order for nutritional support. Furthermore, the study demonstrated that those using a validated tool had slightly more patients screened as at risk (31.10%) compared with those using a non-validated tool (27.07%). Those using a non-validated tool had more consultations for RDNs (67.85% compared with 56.37%) and more orders for oral nutrition supplements (73.34% compared with 58.75%) (Figure 3B). The rate of malnutrition diagnosis of patients screened as at risk with a validated tool was 3 times higher than for those screened with a non-validated tool (23.16% compared with 7.28%)

Patel et al. (2014) conducted a national survey of hospital-based professionals in the United States focused on nutrition screening and assessment practices and associated gaps in knowledge of nutrition care. Out of 1,777 unique respondents, only 23.1% reported using a validated assessment tool to help identify clinical characteristics for a malnutrition diagnosis. Nutrition assessments conducted for at-risk patients identified by malnutrition screening using a validated screening tool was associated with key patient outcomes including less weight loss, reduced length of stay, improved muscle function, better nutritional intake, and fewer readmissions (Mueller, 2011).

**Risk Adjustment:** No

**Sampling:** None

**Data Reported As:** Aggregated rate generated from count data reported as a proportion (numerator/denominator)

**References:**

Abizanda P, Sinclair A, Barcons N, Lizán L, Rodríguez-mañas L. Costs of Malnutrition in Institutionalized and Community-Dwelling Older Adults: A Systematic Review. *J Am Med Dir Assoc.* 2016;17(1):17-23.

Allard J et al. Malnutrition at Hospital Admission-Contributors and Effect on Length of Stay: A Prospective Cohort Study From the Canadian Malnutrition Task Force. *JPEN* 2016; 2016 May;40(4):487-97

Amaral TF, Matos LC, Tavares MM, Subtil A, Martins R, Nazaré M, et al. The economic impact of disease-related malnutrition at hospital admission. *Clin Nutr.* 2007;26(6):778–84.

Barker et al., Hospital malnutrition: prevalence, identification and impact on patients and the healthcare system. *J Environ Res Public Health.* Feb 2011; 8(2): 514–527. Published online Feb 16, 2011.

Barrett ML, Bailey MK, Owens PL. Non-maternal and Non-neonatal Inpatient Stays in the United States Involving Malnutrition, 2016. ONLINE. August 30, 2018. U.S. Agency for Healthcare Research and Quality. Available: [www.hcupus.ahrq.gov/reports.jsp](http://www.hcupus.ahrq.gov/reports.jsp).

Choi WJ, Kim J. Nutritional Care of Gastric Cancer Patients with Clinical Outcomes and Complications: A Review. *Clin Nutr Res.* 2016;5(2):65-78.

Corkins MR, Guenter P, DiMaria-Ghalili RA & Resnick HE. Malnutrition diagnoses in hospitalized patients: United States, 2010. *JPEN J Parenter Enteral Nutr.* 2014;38(2):186-95.

Hudson L, Chittams J, Griffith C, Compher C. Malnutrition Identified by Academy of Nutrition and Dietetics/American Society for Parenteral and Enteral Nutrition Is Associated With More 30-Day

Readmissions, Greater Hospital Mortality, and Longer Hospital Stays: A Retrospective Analysis of Nutrition Assessment Data in a Major Medical Center. *JPEN J Parenter Enteral Nutr.* 2018;42(5):892-897.

Khalatbari-soltani S, Marques-vidal P. Impact of nutritional risk screening in hospitalized patients on management, outcome and costs: A retrospective study. *Clin Nutr.* 2016;S0261-5614(16)00069-8.

Kruizenga HM, Van Tulder MW, Seidell JC, Thijs A, Ader HJ, Van Bokhorst-de van der Schueren MAE. Effectiveness and cost-effectiveness of early screening and treatment of malnourished patients. *Am J Clin Nutr.* 2005 Nov;82(5):1082-9.

Lim SL, Ong KC, Chan YH, Loke WC, Ferguson M, Daniels L. Malnutrition and its impact on cost of hospitalization, length of stay, readmission and 3-year mortality. *Clin Nutr.* 2012;31(3):345-50.

Mueller C, Compher C & Druyan ME and the American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.) Board of Directors. A.S.P.E.N. clinical guidelines: nutrition screening, assessment, and intervention in adults. *J Parenter Enteral Nutr.* 2011;35: 16-24.

Patel V, Romano M, Corkins MR, et al. Nutrition screening and assessment in hospitalized patients: a survey of current practice in the United States. *Nutr Clin Pract.* 2014;29(4):483-490.

Sheean P, Farrar IC, Sulo S, Partridge J, Schiffer L, Fitzgibbon M. Nutrition risk among an ethnically diverse sample of community-dwelling older adults. *Public Health Nutr.* 2019;22(5):894-902.

Sherry CL, Sauer AC, Thrush KE. Assessment of the Nutrition Care Process in US Hospitals Using a Web-Based Tool Demonstrates the Need for Quality Improvement in Malnutrition Diagnosis and Discharge Care. *Curr Dev Nutr.* 2017;1(11):e001297.

Snider J, et al. Economic burden of community-based disease-associated malnutrition in the United States. *JPEN J Parenteral Enteral Nutr.* 2014;38:55-165.

Streicher M, Van zwiene-pot J, Bardon L, et al. Determinants of Incident Malnutrition in Community-Dwelling Older Adults: A MaNuEL Multicohort Meta-Analysis. *J Am Geriatr Soc.* 2018;66(12):2335-2343.

Tappenden KA, Quatrara B, Parkhurst ML, Malone AM, Fanjiang G, Ziegler TR. Critical role of nutrition in improving quality of care: an interdisciplinary call to action to address adult hospital malnutrition. *J Acad Nutr Diet.* 2013;113(9):1219-1237.

U.S. Congressional Research Service. Malnutrition in Older Adults (7-5700; Mar. 8, 2017), by Agata Dabrowska. Text in: LexisNexis® Congressional Research Digital Collection; Accessed: June 6, 2017.